



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:

Brent A. Hill, et al.

Serial No.: 10/689,789

Group Art Unit: 2833

Filed: October 20, 2003

Examiner: X. Chung Trans

FOR: MULTI-AXIS RETENTION MECHANISM

### APPEAL BRIEF

Mail Stop Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Applicant submits this appeal brief, thus perfecting the notice of appeal filed on May 20, 2005. A petition for a one month extension of time accompanies this brief.

The required headings and subject matter follow.

#### **(i) Real party in interest.**

This case is assigned of record to Intel Corporation, who is the real party in interest.

#### **(ii) Related appeals and interferences.**

There are no known related appeals and / or interferences.

#### **(iii) Status of claims.**

Claims 1-20 are pending in the application. Claims 1-20 stand rejected. The rejections of claims 1-20 are being appealed.

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**(iv) Status of amendments.**

No amendments have been filed after the final rejection. The attached Claims appendix reflects the current status of the claims.

**(v) Summary of claimed subject matter.**

With respect to claim 1, some embodiments of the invention involve a system board (e.g. system board 61, see Figs. 6-7, page 7, line 20), a connector (e.g. connector 42, see Figs. 6-7, page 7, line 20) mounted on the system board, an electronic card (e.g. card 63, see Figs. 6-7, page 7, line 21) attached to the connector, the card overhanging the connector at least on an inward end of the card, a guide (e.g. guide 44, see Figs. 6-7, page 7, line 24) secured to the system board, wherein the guide is adapted to inhibit lateral movement of the card (e.g., see page 7, lines 24-25), and a latch (e.g. latch 47, see Figs. 4-5, page 7, line 8) connected to the guide and adapted to aid in retaining the electronic card in the connector (e.g., see page 8, lines 5-7).

With respect to claim 12, some embodiments of the invention involve providing a system board (e.g. system board 61, see Figs. 6-7, page 7, line 20), mounting a connector (e.g. connector 42, see Figs. 6-7, page 7, line 20) on the system board, attaching an electronic card (e.g. card 63, see Figs. 6-7, page 7, line 21) to the connector, the card overhanging the connector at least on an inward end of the card (e.g. guide 44, see Figs. 6-7, page 7, line 24), securing a guide (e.g. guide 44, see Figs. 6-7, page 7, line 24) to the system board, providing a latch (e.g. latch 47, see Figs. 4-5, page 7, line 8) connected to the guide, inhibiting lateral movement of the card with the guide (e.g., see page 7, lines 24-25), and inhibiting removal of the electronic card from the connector with the latch (e.g., see page 8, lines 5-7).

**(vi) *Grounds of rejection to be reviewed on appeal.***

I. Claims 1-10 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,637,004 (Chen).

II. Claims 11-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chen.

**(vii) *Argument.***

**Claim 1**

In order to anticipate, the reference must identically disclose each and every claim recitation. Claim 1 recites, among other things, a guide secured to the system board, wherein the guide is adapted to inhibit lateral movement of the card. Chen fails to disclose the recited guide which is adapted to inhibit lateral movement of the card.

The rejection of record, from the initial office action mailed August 11, 2004, states that “Chen discloses … a guide (34) secured to the board, wherein the guide is adapted to inhibit lateral movement of the card.” The foregoing is a factually inaccurate statement of what is disclosed in Chen. Notably this statement is made without reference or citation to any supporting portion of Chen. Element 34 in Chen refers to side walls 34 of the connector 30. The side walls 34 are not described as guides and nothing in Chen describes that the side walls 34 inhibit lateral movement of the card, particularly, as recited in claim 1, when the card is attached to the connector.

In the final office action mailed February 18, 2005, the Examiner states that “Chen clearly discloses that the walls 34 comprise a pair of end walls (figs. 2-3, element 36).” This is another factually inaccurate statement of what is disclosed in Chen. The side walls 34 do not comprise the end walls 36. Rather, Chen describes that the

housing 32 comprises a pair of side walls 34 and a pair of end walls 36. Rather than clarifying the Examiner's position, the further misstatements make the rejection even more ambiguous because it is unclear whether the Examiner is now relying on the side walls 34 or the end walls 36 for the recited guide.

In the final office action mailed February 18, 2005, the Examiner further states that "the end walls to define a **closed type space** for receiving a module board (col. 1, lines 18-23)." (Emphasis in original). While this is yet another factually inaccurate statement of what is disclosed in Chen (the side walls together with the end walls define the closed type space 18), the Examiner's position is rendered further unclear by the following statement of the Examiner. "Thus, it is clear to one skilled artisan that the described **closed type space** is inhibiting lateral movement of the board/card when it is provided within the slots." (Emphasis added). Rather than clarifying the Examiner's position, the further misstatements make the rejection even more ambiguous because it is now unclear whether the Examiner is relying on the side walls 34, the end walls 36, or the closed type space 18 for the recited guide. Applicants note that the space 18 is literally 'space' (i.e. the volume inside the connector housing, see Fig. 1 of Chen) and it is unclear how 'space' can inhibit movement of anything.

It appears that the Examiner is relying on a theory of inherency. However, the prosecution record is unclear because the reliance on inherency is not stated in any rejection. The Examiner does not, despite applicants prior request for clarification, point out any express disclosure that the side walls 34 or end walls 36 in Chen inhibit any lateral movement of the card 102 in Chen. Accordingly, applicants are left to presume that the Examiner is relying on some unstated theory of inherency. MPEP § 2112 states that "[t]he fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic." Moreover, MPEP § 2112 further states that "[i]n relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the

teachings of the applied prior art.” Because the Examiner does not meet the burdens set forth in MPEP § 2112 to establish inherency, the Board should reverse the rejection.

Although Applicants respectfully requested clarification of the Examiner’s position, the Examiner has decided to stand on a facially incorrect and / or ambiguous rejection of record, apparently to avoid having to issue a second non-final action. Applicants fail to appreciate how this course of action advances the prosecution or clarifies the record for appeal. Although applicants believe the rejections should be reversed for the substantive reasons set forth below, at a minimum the board should remand the case and require the Examiner to set forth a fully articulated and supported rejection of record.

The Examiner is required to answer all traversals. MPEP § 707.07(f) provides that “[w]here the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, take note of the applicant's argument and answer the substance of it.” Accordingly, the Examiner should have responded to the substance of all of applicants’ prior arguments. In particular, the Examiner failed to respond the substance of applicants’ arguments regarding:

- a) there is no supporting description of Fig. 6 or elsewhere in Chen which describes the walls 34 contacting the card 102;
- b) that the card 102 does not protrude sufficiently beyond the walls 34 to even involve lateral flexing of the card 102;
- c) that in the more detailed Figs. 7A-7D and 10A, it is clear that the walls 34 provide clearance for the card 102, but do not contact the side surfaces of the card 102;
- d) that Figs. 7A-7D are the more detailed views of Fig. 6; and
- e) that Figs. 7A-7D and 10A show substantial clearance between the walls 34 and the card 102.

The Board should consider the Examiner to have conceded each of the foregoing unanswered arguments.

The rejection of record cites the walls 34 of the housing for allegedly corresponding to the recited guide, but only generally asserts, without citation to any supporting portion of Chen, that Chen discloses that the walls 34 are adapted to inhibit lateral movement of the card (102). However, this unsupported assertion is incorrect.

The side walls 34 and end walls 36 collectively form the housing 32 of the connector 100. But the side walls 34 do not inhibit lateral movement of the card 102. Applicants first note that the office action fails to identify any portion of Chen which describes the side walls 34 inhibiting lateral movement of the card 102. It appears that the Examiner is relying solely on the illustration in Fig. 6 to sustain the rejection. However, the Examiner misconstrues what is shown in Fig. 6 of Chen.

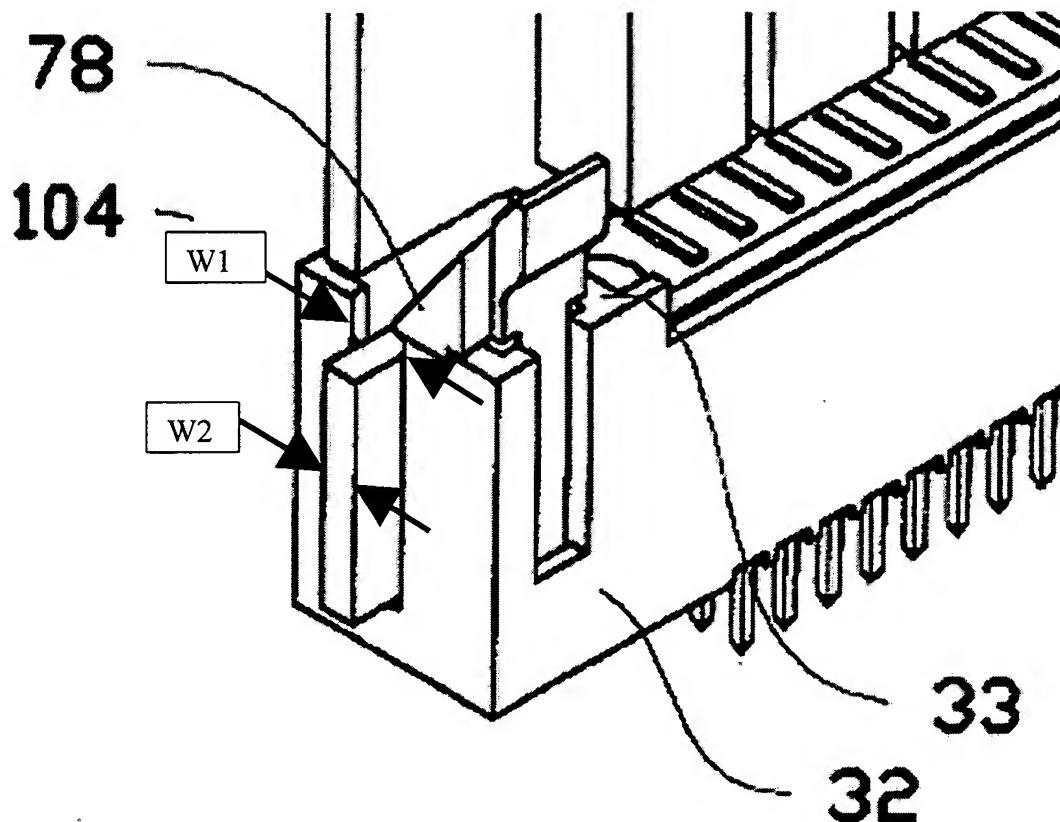
In any event, applicants can find no supporting text in Chen describing any portion of the walls 34 inhibiting lateral movement of the card 102. With reference to Figs. 7A through 7D, and Fig. 10A of Chen, it appears that the slots in the walls 34 provide a clearance for a short portion of the card 102 to protrude therethrough, but the walls 34 do not even contact the card 102. Therefore, the walls 34 do not inhibit lateral movement of the card 102. Accordingly, neither the text description nor the drawings of Chen teach or suggest a guide adapted to inhibit lateral movement of the card.

In numbered paragraph 5 of the final office action, the Examiner argues essentially that the perspective view of Fig. 6 of applicants' own specification has some similarity to Chen's Fig. 6, and therefore Chen shows that the walls 34 are adapted to inhibit lateral movement of the card 102. This is simply erroneous. First, it is improper for the Examiner to use applicants' own teachings to inform any aspect of the prior art. Moreover, the perspective view in both applicant's specification and Chen are limited in

their ability to communicate the more detailed description of their respective structures. This is of course why patent specifications include textual description of the figures and more detailed drawings views. It is the textual description of applicants' disclosure that describes how the guide 44 inhibits lateral movement of the card 63. For example, paragraph 35 of applicants' specification describes that 'the walls 44a and 44b of the guide 44 may contact one or more side surfaces of the card 63 to reduce the amount the card 63 may flex about the pivot point near the end of the connector 42.' In contrast, Chen provides no such description in connection with the walls 34 or the slot 24. Moreover, the more detailed views of Figs. 7A-7D contradict the Examiner's position. The description of the drawings, at col. 2, lines 47 – 62 of Chen, makes it clear that Figs. 7A-7D are the more detailed description of Fig. 6.

As noted above, claim 1 recites, among other things, a guide secured to the system board, wherein the guide is adapted to inhibit lateral movement of the card. As can be best understood, the Examiner is relying solely on Fig. 6 of Chen for allegedly identically disclosing this claim recitation. In the advisory action, the Examiner states "one of ordinary skill in the art would recognize that, in fig. 6, the endwalls do adapt to contact on or more side surfaces of the card 102 and adapt to provide a side constraint which substantially prevents lateral flexing of the module/card." This is simply incorrect.

For the sake of argument, perhaps at first glance, and particularly with the hindsight benefit of the present disclosure, one skilled in the art might wonder if the slots of the end walls 36 contacted the sides of the card 102 in Fig. 6 of Chen. However, upon closer inspection of Fig. 6 it is clear that the slots are much wider than the card and one skilled in the art would appreciate that the slots do not contact the card, and therefore provide no inhibition to lateral movement of card, particularly, as recited in the claims, when the card is attached to the connector. Below, applicants provide an annotated partial view of Fig. 6 from Chen that clearly shows the slots are much wider than the card ( $W_1 > W_2$ ):



Moreover, if there was any question regarding the relative widths or possible contact between the slot and the card, one skilled in the art would simply refer to the exploded view of Fig. 5 (where it is also clear that the slot is much wider than the card), or the detailed side views of Figs. 7A-7D (which clearly illustrate a clearance between the slot and the card on both sides).

Because Chen fails to teach or suggest a guide is adapted to inhibit lateral movement of the card, particularly when the card is attached to the connector, claim 1 is not anticipated by and is patentable over Chen, and the rejection should be reversed.  
Claims 2-11 depend from claim 1 and are likewise patentable.

Claim 12

Claim 12 recites inhibiting lateral movement of the card with the guide, and is therefore patentable for at least the reasons given above with respect to claim 1.

Accordingly, the rejection should be reversed. Claims 13-20 depend from claim 12 and are therefore also patentable.

The Examiner further errs by repeating the rejection of claims 11-20 under 35 U.S.C. § 103(a) without considering the amendment made to claim 12. In the initial action, the rejection was made under § 103 because of some claim language that has been canceled from claim 12. Accordingly, it appears that the rejection, if maintained, should be made under § 102. In any event, the Examiner's position is unclear. Although applicants believe the rejection should be reversed for the substantive reasons set forth herein, at a minimum applicants are entitled to a new office action which sets forth the correct rejection, along with the Examiner's formal position.

MPEP § 2141.02 sets forth that “[p]rior art must be considered in its entirety, including disclosures that teach away from the claims.” Applicants submit that Figs. 7A through 7D of Chen teach away from the claims, particularly any claim which recites that the guide contacts the card. The office action does not set forth how the Examiner has considered this disclosure, if at all. The Examiner contradicts himself in the Advisory Action. Initially, the Examiner states that Fig. 6 teaches that the end walls do contact the side surfaces of the card. Later, the Examiner states that Figs. 7A-7D and 10A ‘does show tolerance gap.’ In other words, Figs. 7A-7D and 10A show that the end walls DO NOT contact the side surfaces of the card. The Examiner further states that one skilled in the art would understand that such ‘tolerance gap is required ...’ (Emphasis added). As previously pointed out to the Examiner (and apparently conceded), Chen plainly states that Figs. 7A-7D are the more detailed views of Fig. 6 (see Chen, col. 2, lines 47-61, each of Figs. 6 and 7A-7D are views of the connector and module of Fig. 5). With his admission that Figs. 7A-7D show a clearance between the card and the end walls of the connector housing and the apparent concession that Figs. 7A-7D relate to what is shown

in Fig. 6, the Examiner should concede that in fact Fig. 6 does not teach that the end walls contact the side surfaces of the card 102.

Because Chen fails to teach or suggest inhibiting lateral movement of the card with the guide, claim 12 is patentable over Chen. Claims 13-20 depend from claim 12 and are likewise patentable.

### Claims 2 and 13

With respect to claims 2 and 13, Chen does not teach or suggest that the side walls 34 provide a side constraint for the card 102. Moreover, as apparently conceded by the Examiner, the card 102 does not protrude sufficiently beyond the side walls 34 to even involve lateral flexing of the card 102. Applicants note that Chen is not concerned with and does not even mention lateral flexing of the card 102.

To the extent the Board would give any weight to further statements of the Examiner which are not part of the rejection of record, applicants further note that Chen does not teach or suggest that the end walls 36 or the closed type space 18 provide any side constraint for the card 102. Moreover, as apparently conceded by the Examiner, the card 102 does not protrude sufficiently beyond the end walls 36 to even involve lateral flexing of the card 102.

Because Chen fails to teach or suggest providing a side constraint for the card 102, claims 2 and 13 are separately patentable over Chen, and the rejections should be reversed.

Each of claims 2 and 13 further recite ‘a point where the guide contacts the card.’ The Examiner has now admitted that Chen fails to disclose this structural recitation.

Specifically, the Examiner has admitted that Figs. 7A-7D of Chen show a ‘tolerance gap’ and has conceded that these are the more detailed views of Fig. 6. Accordingly, in Chen there is no point where the wall 36 contacts the card 102. Any structural difference is sufficient to overcome a § 102 rejection (and the rejection of claim 13 should properly be considered under § 102). Accordingly, the rejections should be reversed.

Claims 3 and 14

With respect to claims 3 and 14, each of these claims recites features relating to the guide contacting one or more side surfaces of the card. As discussed extensively above, none of the side walls 34, end walls 36, or closed type space 18 contact the card 102. Applicants note that the relied upon Fig. 6 is a perspective view which does not provide sufficient detail to determine whether or not anything contacts the card 102. However, there is no supporting description of Fig. 6 or elsewhere in Chen which describes the walls 34 or 36 contacting the card 102. Upon review of the more detailed Figs. 7A-7D and 10A, it is clear that the end walls 36 provide clearance for the card 102, but do not contact the side surfaces of the card 102. In fact, the text description of Chen makes clear that Figs. 7A-7D are the more detailed views of Fig. 6. The Examiner must also consider those portions of Chen which teach away from the claims.

The Examiner has now admitted that Chen fails to disclose this structural recitation. Specifically, the Examiner has admitted that Figs. 7A-7D of Chen show a ‘tolerance gap’ and has conceded that these are the more detailed views of Fig. 6. Accordingly, in Chen the wall 36 does not contact the card 102. Any structural difference is sufficient to overcome a § 102 rejection (and the rejection of claim 14 should properly be considered under § 102). Accordingly, the rejections should be reversed.

Claims 4 and 15

With respect to claims 4 and 15, each of these claims recite features relating to the guide contacting two opposed side surfaces of the card. Applicants note that Figs. 7A-7D and 10A show substantial clearance between the side walls 34, the end walls 36, and the card 102. Accordingly, the walls (34 or 36) do not contact two opposed side surfaces of the card 102. For the Board's convenience, applicants below provide an annotated Fig. 7A showing substantial clearance between the slot in wall 36 and the card 102:

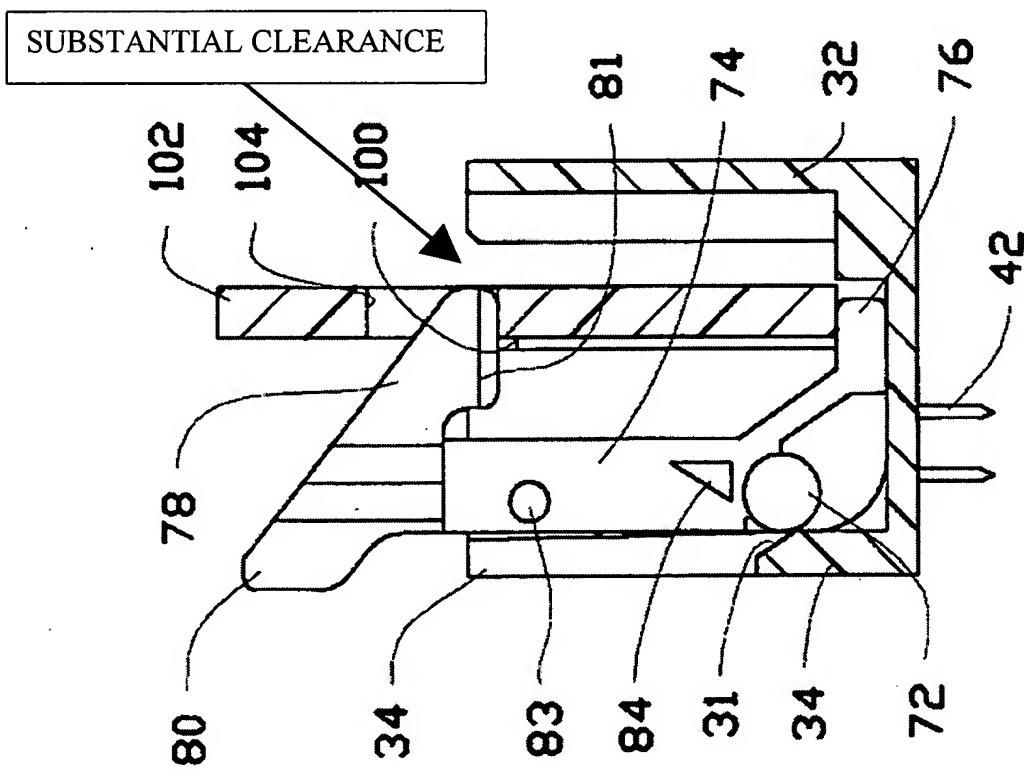


FIG. 7(A)

The Examiner has now admitted that Chen fails to disclose this structural recitation. Specifically, the Examiner has admitted that Figs. 7A-7D of Chen show a 'tolerance gap' and has conceded that these are the more detailed views of Fig. 6. Accordingly, in Chen the wall 36 does not contact the card 102. Any structural difference is sufficient to overcome a § 102 rejection (and the rejection of claim 15

should properly be considered under § 102). Applicants submit that the substantial clearance shown in Fig. 7A is more than a ‘tolerance gap.’ Accordingly, the rejections should be reversed.

### CONCLUSION

In view of the foregoing, favorable reconsideration and reversal of the rejections is respectfully requested. Early notification of the same is earnestly solicited. If there are any questions regarding the present application, the Examiner and / or the Board is invited to contact the undersigned attorney at the telephone number listed below.

Respectfully submitted,

August 22, 2005

Date

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**(viii) *Claims appendix.***

1. An electronic system, comprising:
  - a system board;
  - a connector mounted on the system board;
  - an electronic card attached to the connector, the card overhanging the connector at least on an inward end of the card;
  - a guide secured to the system board, wherein the guide is adapted to inhibit lateral movement of the card; and
  - a latch connected to the guide and adapted to aid in retaining the electronic card in the connector.
2. The system of claim 1, wherein the guide is adapted to provide a side constraint which substantially prevents lateral flexing of the card at a point where the guide contacts the card.
3. The system of claim 1, wherein the guide contacts one or more side surfaces of the card.
4. The system of claim 3, wherein the guide contacts two opposed side surfaces of the card.
5. The system of claim 1, wherein the guide is positioned along a bottom edge of the card.
6. The system of claim 1, wherein the latch is adapted to cooperate with a feature on the electronic card.
7. The system of claim 1, wherein the latch is adapted to engage with an opening in the electronic card.

8. The system of claim 1, wherein the guide includes a side wall and the latch is connected to the side wall.

9. The system of claim 8, wherein the latch comprises a lever which pivots about an axis which is parallel with a lengthwise axis of the connector.

10. The system of claim 9, wherein the latch includes a base portion between the pivot axis and the system board and wherein the base portion is adapted to aid in the removal of the electronic card from the connector.

11. The system of claim 8, wherein the guide and the latch comprises a one-piece assembly.

12. A method, comprising:  
providing a system board;  
mounting a connector on the system board;  
attaching an electronic card to the connector, the card overhanging the connector at least on an inward end of the card; and  
securing a guide to the system board;  
providing a latch connected to the guide;  
inhibiting lateral movement of the card with the guide; and  
inhibiting removal of the electronic card from the connector with the latch.

13. The method of claim 12, wherein inhibiting lateral movement of the card comprises providing a side constraint with the guide which substantially prevents lateral flexing of the card at a point where the guide contacts the card.

14. The method of claim 12, wherein inhibiting lateral movement of the card comprises contacting one or more side surfaces of the card with the guide.

15. The method of claim 14, wherein the guide contacts two opposed side surfaces of the card.

16. The method of claim 12, wherein the latch is adapted to cooperate with a feature on the electronic card.

17. The method of claim 12, further comprising:  
engaging an opening in the electronic card with the latch.

18. The method of claim 12, wherein the guide includes a side wall and the latch is connected to the side wall.

19. The method of claim 18, wherein the latch comprises a lever which pivots about an axis which is parallel with a lengthwise axis of the connector.

20. The method of claim 19, wherein the latch includes a base portion between the pivot axis and the system board and wherein the base portion is adapted to aid in the removal of the electronic card from the connector.

**(ix) Evidence appendix.**

None.

**(x) Related proceedings appendix.**

None.

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Katherine Jennings

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Katherine Jennings  
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Date